

The Office states that the primary reference in both rejections, Hester, et al. and Yoshida et al., shows that the compounds of the claims of this application are known antibacterial agents. Both rejections then rely on the secondary reference, Nair et al., to establish that bacteria are known to be an important cause of bone diseases, to induce bone destruction, and to stimulate bone matrix loss. The Office then concludes that it would have been obvious to employ antibacterial agents to treat osteoporosis, bone resorption, or other bone diseases. Applicants traverse these rejections for the following reason.

Nair et al. is a review that discusses the cellular and molecular mechanisms involved in the bacterially induced skeletal pathologies of periodontitis, osteomyelitis, bacterial arthritis, and infected metal implants. Nair et al. does not teach, suggest, or conclude that antibacterial agents would be useful in the treatment of such diseases, however. Rather, Nair et al. concludes by stating that the further understanding of the pathogenetic mechanisms could provide useful therapeutic targets for the development of new treatment modalities. Thus applicants submit that Nair et al. not only does not teach or suggest the use of antibiotics for the treatment of certain bacterially related bone diseases but applicants submit that Nair et al. teaches away from such a conclusion.

Whether or not treatment of the bacterial infections might be useful in the treatment of such bacterially-related bone diseases by reducing or eliminating associated bacteria, applicants' invention is not directed to the treatment of bone loss caused by bacteria, but rather, applicants' discovery is that certain compounds, albeit previously known to have antibacterial activity, also possess the ability to enhance bone growth, presumably by preventing bone resorption, and thus are useful in the treatment of many conditions associated with bone loss. Indeed, one of the embodiments of applicants' invention is the treatment of bone diseases where no bacterial infection is present (see claim 6). Thus applicants' discovery is that the compounds of the claims of this application are useful in treating a variety of conditions, many of which have no relationship to bacteria.

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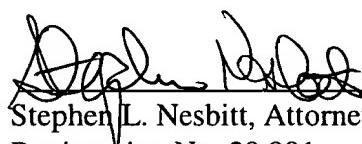
Further, Nair et al. notes in its introduction that the bone diseases osteoporosis, rheumatoid arthritis, and osteoarthritis, are idiopathic and thus it can not be concluded that these conditions are caused by bacterial infection. Applicants submit that it would be illogical to conclude that antibacterial agents might be useful in the treatment of idiopathic diseases, not known to have a bacterial causative component.

Applicants thus conclude that the art does not teach or suggest that the compounds of the instant claims would be useful in the treatment of diseases associated with bone loss by enhancing bone growth. For this reason, applicants submit that the rejections of the instant claims should be reconsidered and withdrawn.

CONCLUDING REMARKS

Applicants respectfully submit that the remaining claims are patentable and request that the outstanding rejections of the claims of this application be reconsidered and withdrawn. Applicants await an early favorable indication regarding the allowability of this application.

Respectfully submitted,



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Date: 3/29/02

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